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Rapid changes measured in key Alzheimer's protein

By Michael C. Purdy

For the first time, researchers have described hour-by-hour changes in the amount of amyloid beta, a protein that is believed to play a key role in Alzheimer's disease, in the human brain.

"Proving that we can directly measure amyloid beta in the human brain is an important step forward for both clinical and basic research, and that may be true not just in Alzheimer's disease but also in other serious neurological disorders," said co-first author David L. Brody, M.D., Ph.D., an assistant professor of neurology who treats brain injury and neurology patients at Barnes-Jewish Hospital.

A collaborative team of scientists at the School of Medicine and the University of Milan report their results in a recent issue of Science.

The results of the study contradicted the expectations of researchers, who were hoping to learn why brain injury is linked to higher risk of Alzheimer's disease. They hypothesized that such injuries, caused by motor vehicle accidents, assaults and falls, would lead to an increase in amyloid beta levels. Instead, they found recovery from brain injury, rather than the injury itself, seemed to increase amyloid. The better a patient's overall neurological status, the higher their amyloid beta levels rose.

"We can't at this point rule out a very early spike in amyloid right after a brain injury," Brody said. "This study is just the beginning."

Amyloid beta levels were measured using a technique called microdialysis, which involves placing a small catheter into the brain tissue to sample the fluid in the spaces between cells. The Italian group, headed by Sandra Magnoni, M.D., and Nino Stocchetti, M.D., and located at the Milan-based trauma center Ospedale Maggiore Policlinico, brought substantial previous experience with microdialysis to the study.

Brody

In the study, 18 patients recovering from traumatic brain injuries or ruptured brain aneurysms had microdialysis catheters placed in their brain tissues to measure amyloid beta while they were in the intensive-care unit and were having other monitoring procedures performed.

"The results have potentially important clinical implications because the measurement of amyloid beta in the human brain may turn out to be a good indicator of how well brain cells are communicating with each other, even in very sick patients," said senior author David M. Holtzman, M.D., the Andrew B. and Gretchen P. Jones Professor and head of the Department of Neurology. "If the results are validated in further studies, this may assist physicians in

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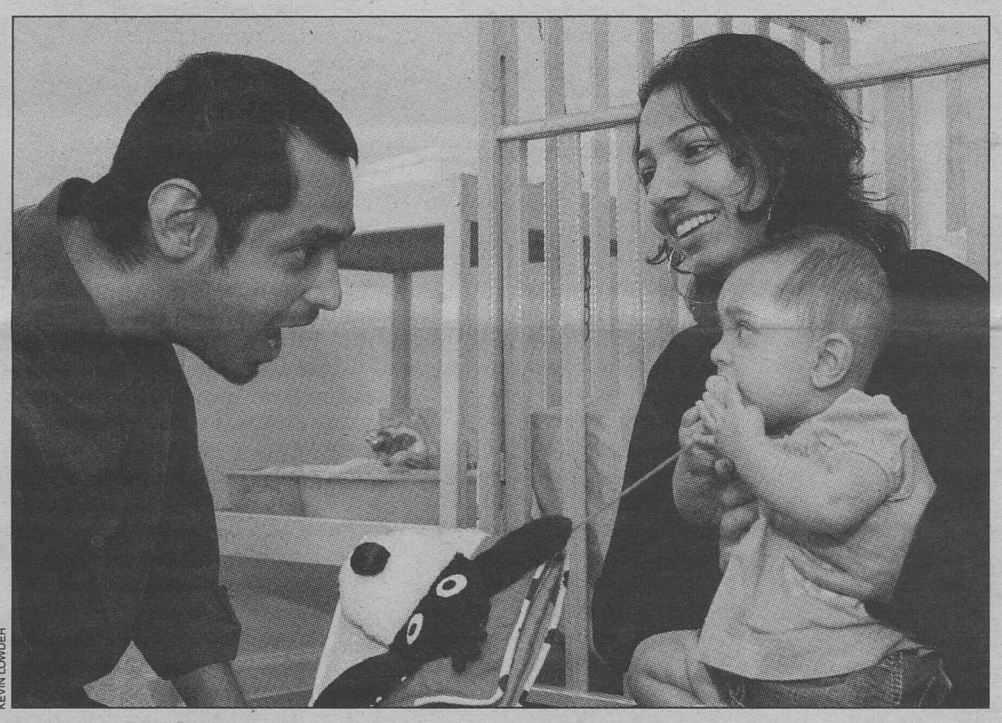

KEVIN LOWDER

Asad Q. Ahmed, Ph.D., and his wife, Asma Kazmi, play with their six-month-old daughter, Marjaan al-Qadri, in the couple's apartment in Nemerov House in the South 40's Wayman Crow Residential College. Ahmed is one of three new faculty fellows this year.

Bridging the gap: South 40 faculty fellows help integrate academic and residential life

By Neil Schoenherr

Students living in the Wayman Crow, Brookings and Liggett/Koenig residential colleges in the South 40 may notice a few "more mature" fellow residents this year.

Asad Q. Ahmed, Ph.D., assistant professor of Arabic and Islamic studies; Ian MacMullen, Ph.D., assistant professor of political science; and Andrew Rehfeld, Ph.D., associate professor of political science, all in Arts & Sciences, have moved into apartments in the residential colleges as part of the faculty fellows program.

All three are excited to be living and learning members of the South 40 community.

"The faculty fellows program offers a unique opportunity to the faculty of Washington University to share their academic and cultural interests with students outside of the classroom," said Ahmed, who lives in Wayman Crow with his wife, Asma Kazmi, and six-month-old daughter, Marjaan al-Qadri.

"My family and I are happy to participate in this very worthy endeavor on behalf of the University. We also wished to benefit from being part of such a vibrant community of bright, young men and women who have so much to teach us not just about being academics but also being productive and responsible members of the community," he said.

The goal of the faculty fellows program, started in 1998, is to help integrate academic and residential life by having professors live in the residential colleges with students for three-year stints.

The program emerged in response to the realization that there was a growing gap between faculty members and undergraduate students on college campuses. In addition, many faculty members wished to extend their interaction with students outside the academic realm.

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Vice Presidential Debate

Washington University in St. Louis October 2, 2008

Register on campus to vote

By Neil Schoenherr

With the Oct. 2 vice presidential debate quickly approaching, many people are looking for ways to get more involved in the political process.

To help facilitate interest and participation in the debate and election, the Richard A. Gephardt Institute for Public Service is coordinating an all-day, campus-wide voter registration drive Sept. 18.

Eligible students, faculty and staff will be able to register to vote in Missouri or complete a change of address card at one of 11 locations across the University.

Voters also can learn about how to register in another state and/or obtain an absentee ballot.

U.S. citizens who will be 18 or older Nov. 4 are eligible to vote and should bring a photo ID and one additional form of identification in order to register Sept. 18. A Washington University student or staff ID is acceptable.

This nonpartisan voter registration effort is co-sponsored by several undergraduate, graduate and professional school student groups.

Confirmed locations for the registration drive include:

- Mallinckrodt Student Center main floor, 9:15 a.m.-5 p.m.
- Danforth University Center, 9 a.m.-9 p.m.
- Wohl Student Center, 5 p.m.-8 p.m.

See **Vote**, Page 2

Most ambitious United Way campaign under way at WUSTL

By Jessica Daues

Ashley came to Almost Home — an organization that provides housing, education, counseling and support services to homeless teenage mothers and their children — at age 14 with her 1-year-old son, Daveon.

Among Almost Home's goals, according to Sheroo Mukhtiar, executive director, is helping mothers stay in school and eventually become "anything they want to be," Mukhtiar said.

Though life hasn't been easy for Ashley, five years later, she is a high-school graduate studying at Harris-Stowe State University to be a financial analyst.

Almost Home depends on support from United Way to assist women like Ashley, said Mukhtiar, a 1994 graduate of the George Warren Brown School of Social Work.

"Without you," Mukhtiar said, "we wouldn't be able to continue our mission."

Washington University's 2008 United Way of Greater St. Louis campaign began Sept. 2 with a kickoff breakfast at Whittemore House.

This year's goal of raising $600,000 for the

See **United Way**, Page 2

DAVID KILPER

Sheroo Mukhtiar discusses the importance of giving to the United Way campaign at the campaign's kickoff breakfast at Whittemore House. Mukhtiar is executive director of Almost Home, a United Way-supported organization that provides services to homeless teenage mothers and their children.

WHITNEY CURTIS

Service first, scholarship next Freshmen Natalie Rufat (top, center) and Cici Coquillette (kneeling, center) paint a mural at Ford Elementary School in St. Louis during the 10th annual Service First event Aug. 30. More than 1,000 first-year students volunteered their time to this annual WUSTL tradition to help paint indoor and outdoor murals and maps, create bulletin boards and prepare classrooms for the new year at 12 St. Louis-area public schools. "I hope this event will serve as the beginning of a lasting commitment to service by our students during their time at Washington University," says Stephanie Kurtzman, director of the Community Service Office and associate director of the Richard A. Gephardt Institute for Public Service.

Law professor's expertise helps New Orleans, ABA

The City of New Orleans and the American Bar Association (ABA) have adopted two major planning and land-use projects of Daniel R. Mandelker, J.D., the Howard A. Stamper Professor of Law. The projects are designed to help ensure sound land-use management.

The City of New Orleans City Council unanimously adopted Mandelker's proposed charter changes calling for comprehensive planning and consistency within the city's master plan. The charter changes will be put on the ballot in the November election.

Mandelker has served as a legal consultant for New Orleans' Bureau of Governmental Research, offering his expertise in the city's efforts to drastically reform its land-use policies.

His work has sought to create overall consistency and fairness in the city's processes for making zoning decisions, bring the decision-making process in line with the city's master plan and give neighborhoods a voice in zoning and conditional-use matters.

In the ABA project, Mandelker served as a consultant for the drafting of a Model Law on Local Land Use Planning Procedures.

The model act is intended to serve as a guide to state, local and tribal governments that adopt land-use regulations. It outlines appropriate administrative procedures that may be adopted in whole, in part or used as a reference to address particular situations and establishes a judicial review process.

Mandelker

The model law is based on model legislation principally authored by Mandelker and recently published by the American Planning Association as part of proposed new planning and zoning laws intended to replace existing legislation.

Faculty

Program continues to evolve and grow

– from Page 1

"This program continues to evolve in ways that we couldn't have envisioned when it started 10 years ago," said Jill Stratton, associate dean of students for faculty programs and academic initiatives. "Each new faculty fellow and their family bring such amazing new contributions and programs that help our students connect to each other and to their professors in unique and positive ways."

In all, there are five faculty fellows. Joining Ahmed, MacMullen and Rehfeld are Tili Boon Cuille, Ph.D., associate professor of French in the Department of Romance Languages & Literatures in Arts & Sciences, who lives at William Greenleaf Eliot residential college; and Joseph Thompson, Ph.D., assistant professor of English and of African and African American studies, both in Arts & Sciences, who lives in Park/Mudd.

MacMullen said he and his wife, Lola Fayanju. M.D., resident physician in general surgery at the School of Medicine, joined the program because "we both really enjoy getting to know students as people, not just paper-writers."

"My three years as a non-resident faculty associate taught me that there is a contagious energy and enthusiasm about residential life at the University; it's fun and inspiring to be a part of it," MacMullen said.

He said that while the program helps students see the human face of the faculty and dispel the sense of distance and intimidation, faculty members also benefit from a deeper and broader understanding of students and the undergraduate educational experience at the University.

Rehfeld, who lives with his wife, Miggie Greenberg, and his daughter, Emma, 14, and son, Hoben, 13, in Liggett/Koenig residential college, was interested in getting to know his students outside of the classroom.

"Teaching students gives me a rather narrow view of their lives and interests, what's of concern to them," he said. "This position is an excellent way to bridge the gap between simply professor/student and open up a space in which a mutual appreciation of each other can enhance our lives."

All three professors plan programming for students in their residential colleges.

Ahmed and his wife, a sculptor, plan to host three young St. Louis artists to share their work, sponsor a sculpture event and take trips to area art openings. They will also be showing an independent Iranian film followed by an informational discussion by a leading scholar.

The couple also will open their doors to the Wayman Crow residents once a month for coffee, cookies and conversation.

MacMullen and his wife will be hosting a weekly current affairs discussion group over dinner in their apartment and a series of foreign film nights. "I'm also hoping to dust off my cello and play some chamber music with Brookings residents," he said.

Rehfeld is planning trips to presidential libraries in Springfield, Ill.; Independence, Mo.; and Little Rock, Ark. He also hopes to sponsor a "curry night" of Indian cuisine, dinner on the first night of Rosh Hashana and groups of students to watch the vice presidential debate.

Though they've only been living on the South 40 since late this summer, all three are enjoying the experience.

"I have been struck by two early comments by students," Rehfeld said. "The first is that many of them tell me how 'cool' they think it is that we are living there," he said.

"The other is an expression of appreciation as in, 'I'm really grateful that you've made the sacrifice to live with us.' Little do they know, we don't really see it as a sacrifice at all," he said.

United Way

– from Page 1

United Way is the University's most ambitious yet.

"A goal of this magnitude is going to be a challenge," Chancellor Mark S. Wrighton said, "but I believe the potential is there to go well beyond $600,000 if we can raise the level of participation in the campaign."

Participation in past campaigns has hovered around 14 percent, and the University is looking to increase that percentage in 2008 by offering employees two ways to contribute: via pledge cards, which are being sent via campus mail, and online using the HRMS system.

"I encourage the University community to support the United Way because the community has been so supportive of us," Wrighton said. "Washington University receives substantial benefits from the greater St. Louis community, and this is an opportunity for us to give back."

The University's drive coincides with the United Way's own $65.5 million campaign, which is chaired by Andrew C. Taylor, chairman and CEO of Enterprise Rent-A-Car and member of the WUSTL Board of Trustees.

One of United Way's most impressive attributes is its efficiency, Wrighton said. "More than 90 cents of each dollar that is contributed to the United Way ends up in a United Way agency bringing benefits to people," he said.

The United Way of Greater St. Louis supports nearly 200 health and human-service organizations in the St. Louis region and provides an array of services to a large, diverse population.

United Way-supported agencies offer job counseling and training, affordable child care, disaster relief, opportunities for exercise and recreation and much more to approximately one million people — one of every three in the St. Louis area — each year.

A gift of $250 to the United Way, for example, can provide one week at a shelter for a battered woman and her children or two weeks of day camp for an at-risk youth. A gift of $50 can provide eyeglasses for a child or 25 meals delivered to homebound seniors with disabilities.

The WUSTL campaign officially ends in late October, but the Office of Human Resources will accept pledge cards up until the end of the calendar year and beyond.

To make a pledge online, visit hr.wustl.edu and click on HRMS Self Service. Directions for using the online pledge are included with the Chancellor's letter to all faculty and staff announcing the start of the campaign. For assistance with passwords, call the Help Desk at 935-5707. Click on Employee Self Service and select United Way Pledges.

For more information about the United Way of Greater St. Louis, visit stl.unitedway.org. The Web site also features a video about the United Way, and those who watch the video can enter to win gift cards, St. Louis Cardinals tickets, an HDTV or a 2009 Jeep Patriot.

Vote

Register at 11 locations around the University

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- Art/Architecture lunch cart in the lower level of Givens Hall, 10 a.m.-2 p.m.
- Ursa's Cafe, 6 p.m. -9 p.m.
- Village Cafe, 5 p.m.-8 p.m.
- Farrell Learning and Teaching Center at the School of Medicine, 10 a.m.-2 p.m.
- Law school cafe, 10 a.m.-2 p.m.
- School of Social Work commons, 10 a.m.-2 p.m.
- Olin Business School main entrance, 10 a.m.-2 p.m.
- Campus Y, 9 a.m.-5 p.m.

For more information on voter registration and election-year events, visit gephardtinstitute.wustl.edu or debate.wustl.edu.

Protein

Important clues about origins of Alzheimer's

– from Page 1

making important patient management decisions in patients with acute neurological disorders."

In a study published in 2005, Holtzman and others showed that brain cell communication was directly linked to the levels of amyloid beta in a mouse model of Alzheimer's disease. When there was increased communication between brain cells, amyloid beta increased. When there was reduced communication, amyloid beta decreased. However, it was not known whether the same relationship between brain cell communication and amyloid beta levels would hold in humans.

The results provide scientists important clues about the general origins of Alzheimer's. Further investigation is needed to answer the specialized question of why brain injury increases risk of Alzheimer's. This experiment was a test of a model that suggests brain injury accelerates harmful processes that cause Alzheimer's. Although scientists didn't find what they expected, this model still cannot be ruled out, Brody said.

"We haven't measured how brain injury affects amyloid beta inside cells, nor have we determined whether brain injury affects the ability of amyloid beta to form small aggregates that may be especially harmful," he said.

A second explanation for the link between brain injury and Alzheimer's suggests that injury may reduce the brain's ability to compensate for Alzheimer's-related damage, making the symptoms of the disease evident much earlier than they would otherwise appear. Evidence exists for both models, and both could be valid in different settings, Brody said.

"Our ultimate goal is to develop interventions that we can apply after a traumatic brain injury to improve outcomes and reduce the long-term risk of Alzheimer's," he said.

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School of Medicine Update

Endometrial cancer discovery shows promise for treatments

By Gwen Ericson

Researchers have found a potential new approach to treating endometrial cancer — a drug that was shown to be effective even against human endometrial cancer cell lines that tend to be treatment resistant.

Scientists at the School of Medicine and at the Phoenix-based nonprofit research organization Translational Genomics Research Institute (TGen) discovered that introducing a particular inhibitor drug can turn off cell receptors that are responsible for tumor growth in a significant number of patients with endometrial cancer.

The inhibitor drug proved effective even in endometrial cancer cell lines containing a commonly occurring mutant gene, PTEN, previously associated with resistance to drug treatment.

The findings appeared Sept. 2 in a paper published as a priority report by the journal Cancer Research.

Endometrial cancer, which invades the inner wall of the uterus, is the most common gynecological cancer in the United States. This year more than 40,000 women will be diagnosed, and nearly 7,500 women will die of the disease, according to the American Cancer Society (ACS).

Among women, only breast, lung and colon cancers strike with more frequency. And while endometrial cancer is slow to develop and often not detected until after age 60, nearly one in eight women who are diagnosed die within five years, according to the ACS.

Pamela Pollock, Ph.D., an associate investigator at TGen and the paper's senior author, led a team that used the latest genome-scanning technology to sequence 116 endometrioid endometrial tumor samples. The work was done in association with Paul Goodfellow, Ph.D., an expert in endometrial cancer and co-director of the Hereditary Cancer Core at the Siteman Cancer Center.

In May 2007, the research team announced that they had discovered previously unrecognized alterations in the fibroblast growth factor receptor 2 (FGFR2) gene. The altered FGFR2 is present in the cancer cells of nearly 15 percent of women with endometrioid endometrial tumors, a kind of tumor that represents 80 percent of all endometrial cancers.

By introducing a commercially available inhibitor drug, PD173074, the researchers showed that they could stop cell growth and induce cell death in endometrial cell lines that contained the altered FGFR2 gene, which causes cell receptors to get stuck in the "on" position and signal endometrial cells to grow out of control.

Treatment of endometrial cancer can involve surgical removal of the uterus, radiation and chemotherapy. While many women are successfully treated with these approaches, about 15 percent of those with endometrioid endometrial cancer have persistent or recurring tumors that are resistant to current drug therapies. Mutations in several genes previously have been identified in endometrial tumors, but none have been suitable drug targets — until now.

"This targeted approach holds great promise for patients with uterine cancer (endometrioid endometrial) tumors that contain the FGFR2 mutation and offers yet another powerful example of how genomic medicine is changing the way we look at and treat cancer," said Daniel Von Hoff, M.D., TGen's physician-in-chief.

Goodfellow, also a professor of surgery and of obstetrics and gynecology at the School of Medicine, agreed, saying that the discovery that endometrial cancer cells die when treated with an FGFR2 inhibitor — even when they carry other genetic abnormalities common in uterine cancers — suggests anti-FGFR2 therapies have great potential.

A clinical trial based on the study is planned for next year.

RAY MARKLIN

Up and coming Lesley Rankin, a senior at Gateway High School, scrapes off a colony of cells from a petri dish in the lab of Justin Fay, Ph.D., assistant professor of genetics, while Devi Swain, a fourth-year graduate student in the Division of Biology and Biomedical Sciences, assists. Lesley was part of the School of Medicine's summer Young Scientist Program, designed to attract high-school students primarily from disadvantaged backgrounds into scientific careers, and she continues to volunteer in the lab.

Sensor that detects stomach viruses identified

By Caroline Arbanas

There's no cure for the so-called stomach flu, a group of highly contagious viruses that can hit with a vengeance, causing nausea, vomiting and diarrhea. Doctors' standard advice: drink lots of fluids and let the virus run its course.

Now, School of Medicine scientists have identified the primary immune sensor that detects the presence of stomach viruses in the body. They show that the sensor, a protein called MDA-5, triggers an immune response that revs up the body's defenses to fight off the infection.

This knowledge may help develop a treatment that prevents or reduces the infection, the researchers suggest in their study, recently published in the open-access journal PLoS Pathogens.

The stomach flu is technically not the flu: The flu virus only affects the respiratory tract. The stomach flu is known scientifically as a norovirus. Norovirus outbreaks are common in locations where people live close together, such as cruise ships, nursing homes, military bases and schools. Antibiotics are ineffective because they fight bacteria, not viruses. Only recently have scientists been able to grow noroviruses in the laboratory and study them.

"Our research strongly indicates that MDA-5 is the primary sensor for norovirus infection, but the body's ability to detect the virus is so important that it doesn't just rely on one sensor," said senior investigator Marco Colonna, Ph.D., professor of pathology and immunology. "We found that another protein sensor — TLR3 — serves as a backup, and there may be others that have not yet been discovered."

The team demonstrated their work in mice but said the same proteins are likely responsible for detecting norovirus infection in humans. MDA-5, and to a lesser extent, TLR3, respond by causing other cells to release interferon, which shuts down production of the virus and initiates a full-scale immune attack. MDA-5 and TLR3 are both intracellular proteins.

The researchers suspected that these two proteins may be important in detecting noroviruses because they are known to be important in recognizing similar types of viral infections.

Lead author Stephen McCartney, a graduate student in Colonna's lab, first found that cells in the test tube that lack the MDA-5 protein don't mount an appropriate immune response against norovirus infection.

The team then investigated two groups of mice — one group was bred without the ability to produce MDA-5, and the other was bred to lack TLR3. Both groups of mice had a defective immune response against noroviruses.

Sleckman named director of laboratory and genomic medicine

By Michael C. Purdy

Barry P. Sleckman, M.D., Ph.D., associate professor of pathology and immunology, has been named director of the Division of Laboratory and Genomic Medicine.

Skip Virgin, M.D., Ph.D., the Edward Mallinckrodt Professor and head of pathology and immunology, made the announcement.

"Dr. Sleckman is an outstanding fundamental scientist interested in a range of basic processes that determine how lymphocytes in the immune system develop and function," Virgin said.

"His clinical training and commitment to training of students and residents stand out as true strengths that will influence his division for years to come," Virgin said.

The Division of Laboratory and Genomic Medicine supports the work of many clinical departments by providing diagnostic testing services that help confirm the causes of patient illnesses. Sleckman said the division is already very strong in development and application of traditional laboratory tests from areas such as microbiology, chemistry and hematology. He said he plans to further expand the division's capabilities and research in bioinformatics and molecular and genomic testing techniques.

Sleckman

"The idea is that everybody's different, and people respond differently to treatments," Sleckman said. "Differences in our individual genetic makeup are likely contributing to these altered responses, so we're coming to a point where we're going to need to be able to sequence a portion of a person's genome for the cost of an MRI or a CT scan."

Sleckman earned a medical degree and doctorate from Harvard University in 1989.

He was an instructor in medicine at Harvard prior to coming to WUSTL as an assistant professor of pathology and immunology in 1998. He became associate professor of pathology and immunology in 2003, and he has been the medical director of the Clinical Immunology Laboratory at the School of Medicine and Barnes-Jewish Hospital since 2005.

Parents influence whether children eat fruits, vegetables

By Diane Duke Williams

Providing fruits for snacks and serving vegetables at dinner can shape a preschooler's eating patterns for his or her lifetime.

To combat the increasing problem of childhood obesity, researchers are studying how to get preschoolers to eat more fruits and vegetables. According to Washington University researchers, one way is through early home interventions — teaching parents how to create an environment where children reach for a banana instead of potato chips.

Haire-Joshu

"We know that parents have tremendous influence over how many fruits and vegetables their children eat," said Debra Haire-Joshu, Ph.D., a professor at the George Warren Brown School of Social Work and at the School of Medicine. "When parents eat more fruits and vegetables, so do their children. When parents eat and give their children high-fat snacks or soft drinks, children learn these eating patterns instead."

Haire-Joshu and researchers at the Saint Louis University School of Public Health tested a program that taught parents in their homes how to provide preschool children easy access to more fruits and vegetables and examined whether changes in what the parents ate affected what their children consumed. The study was published in a recent issue of Preventive Medicine.

Past research has shown that diets high in fruits and vegetables are associated with a lower risk of obesity and that children learn to like and eat vegetables before age 5.

In this five-year study in rural, southeast Missouri, 1,306 parents and children between the ages 2-5 participating in Parents As Teachers, a national parent education program, were randomly assigned to two groups. One group enrolled in the High 5 for Kids program, and the other group received standard visits from Parents as Teachers. In the High 5 for Kids group, parents first completed a pretest interview about fruit and vegetable consumption.

Parent educators then visited the home four times, providing examples of parent-child activities designed around nutrition, such as teaching the child the names and colors of various fruits and vegetables and having the child select a variety of fruits and vegetables for breakfast. At each visit, parents also received materials and informational handouts with suggestions for improving feeding practices and the food environment in the home.

Results of a follow-up survey showed that parents in the High 5 for Kids group ate significantly more fruits and vegetables, and a change in the parent's servings of fruits and vegetables also predicted a change in the child's diet.

Although the High 5 for Kids program was effective in improving fruit and vegetable intake in children of normal weight, overweight children in this group did not eat more of these foods. Haire-Joshu said many children today are taught patterns that lead to obesity.

"We want families to provide their child with an environment in which they not only learn how to eat healthy but have the opportunity to practice what they learn," she said. "And by partnering with Parents As Teachers, we now can disseminate this program to their sites nationwide."

University Events

'Birth of the Cool' showcases 1950s California art, design and culture

From painting and architecture to music, film, furniture and the graphic arts, 1950s Los Angeles was an epicenter of American modernism.

Beginning Sept. 19, the Mildred Lane Kemper Art Museum will present "Birth of the Cool: California Art, Design, and Culture at Midcentury," a sprawling multimedia exhibition that investigates how the sleek West Coast aesthetic — at once playful and poised, laid-back and sharply articulated — emerged as cultural shorthand for crisp sophistication.

Organized by the Orange County Museum of Art, "Birth of the Cool" — named for the groundbreaking 1957 album by Miles Davis — includes more than 200 objects exploring the influences, relationships and affinities that bound together a disparate group of artists from a variety of fields and backgrounds.

The installation, echoing the period it covers, includes a jazz lounge; a gallery of abstract paintings; and a media bar with film, animation and television programming. Also on view will be a variety of archival and documentary images as well as an interactive timeline and a gallery devoted to modern furniture and design.

In the 1930s and '40s, Los Angeles attracted artists and intellectuals from across the United States and, critically, from Europe. Many of these new arrivals, fleeing the impending war, brought with them tenets of international modernism and found employment and safe haven in Hollywood. The experimental German filmmaker Oskar Fischinger, for example, was recruited to Paramount and later worked at MGM and Disney studios, while the Hungarian-born Jules Engel helped launch the United Productions of America Studio, which pioneered the flat, graphic style of midcentury animation with cartoons such as "Gerald McBoing Boing" (1950).

COURTESY PHOTO

California cool had a St. Louis connection with the creativity and optimism of Charles and Ray Eames, whose plywood chairs are shown here. Charles Eames studied architecture at WUSTL from 1925-27.

By the '50s, the Hollywood Hills were dotted with modernist residences by architects such as Pierre Koenig, John Lautner and Richard Neutra. Constructed largely of glass and steel, these light-filled homes — many commissioned by Art & Architecture's Case Study House program — were open to the elements, with walls and ceilings that seemed to float in space. A similar sense of spatial instability informed the "hard edge" painting of Karl Benjamin, Helen Lundeberg, Lorser Feitelson, Frederick Hammersley and John McLaughlin. These colorful geometric abstractions, with their ambiguity between flatness and depth, stood in sharp contrast to the gestural and emotive fervency of New York abstract expressionism.

Meanwhile the "cool jazz" of Davis, conceived in reaction to then-dominant bebop, helped define "cool" for a national and global audience and was an important influence on West Coast players such as Chet Baker, Dave Brubeck, June Christy, Shelly Manne, Gerald Mulligan, Art Pepper and Sonny Rollins.

Portraits and album covers by photographer William Claxton captured the movement's sense of effortless grace, just as architectural photographer Julius Shulman helped popularize the modernist home through carefully staged scenes of middle-class suburban couples living amidst high Hollywood style.

Perhaps no figures better exemplify the creativity and optimism of California cool than designers Charles and Ray Eames. Born and raised in St. Louis, Charles Eames studied architecture at the University from 1925-27 then later taught at Michigan's Cranbrook Academy of Art, where he met Sacramento native Ray Kaiser.

In 1941, the couple married and moved to Los Angeles, where they spent the next four decades reshaping American design. Their molded-plywood furniture, plastic chairs and iconic lounge — all showcased in the exhibition, along with rare film clips and other archival materials — joined pioneering technologies with a rigorous yet lighthearted sensibility, creating works that were innovative, affordable and accessible.

Special 'cool' events

In conjunction with "Birth of the Cool," the Kemper museum will offer free afternoon jazz concerts on select Saturdays throughout the fall.

Also scheduled are a series of lectures beginning with Elizabeth Armstrong, Ph.D., chief curator for the Orange County Museum of Art Sept. 20. Other lectures are: Terry Smith, Ph.D., professor of contemporary art history and theory at the University of Pittsburgh (Oct. 13); and Thomas Crow, Ph.D., professor of modern art at New York University (Nov. 7).

Besides the lectures, Eric Mumford, Ph.D., associate professor of architecture in the Sam Fox School of Design & Visual Arts and author of "Modern Architecture in St. Louis," will lead a tour of area landmarks Oct. 5.

The museum also will present "Some Like It Cool," a film series that will include screenings of "Rebel Without a Cause" (Dec. 9); "Anatomy of a Murder" (Dec. 10); and "North by Northwest" (Dec. 11).

"Birth of the Cool" opens with a reception at 7 p.m. Sept. 19 and remains on view through Jan. 5, 2009. Both the reception and exhibition are free and open to the public

Women in Politics • Moliere • Star Formation

"University Events" lists a portion of the activities taking place Sept. 11-24 at Washington University. Visit the Web for expanded calendars for the Danforth Campus (news-info.wustl.edu/calendars) and the School of Medicine (medschool.wustl.edu/calendars.html).

Exhibits

"Birth of the Cool: California Art, Design, and Culture at Midcentury." Through Jan. 5. Kemper Art Museum, 935-4523.

"Bold Strokes and Finesse: The Stage Designs of John Ezell." Through Nov. 22. Des Lee Gallery, 1627 Washington Ave. 621-8537.

Lectures

Thursday, Sept. 11

Noon. Genetics Seminar. "Redundancy in Notch Signaling: Quality or Quantity?" Raphael Kopan, prof. of developmental biology. McDonnell Medical Sciences Bldg., Rm. 823. 362-2139.

3:30 p.m. Whitney R. Harris Institute for Global Legal Studies Lecture. "U.S. Law in International Courts, International Law in U.S. Courts" and "Private Litigation and Arbitration Practice Before International Tribunals and Organizations." Catherine Amirfar, lawyer, LaGrand, Avena, Sanchez-Llamas and Medellin. Co-sponsored by the School of Law. (Refreshments served.) Seigle Hall, Rm. 208. 935-7988.

4 p.m. Chemistry Seminar. "Photochronic Photooxidants-Toward Using Organic Photochromes to Gate Sensitivity to Photoinduced Charge Transfer." Jason Gilmore, prof., Hope College. McMillen Lab., Rm. 311. 935-6530.

7 p.m. Jewish, Islamic & Near Eastern Studies Roundtable. "Transformations in Post-Avicennan Logic: Formal Integrity or Theological Concerns?" Asad Ahmed, asst. prof. of Arabic and Islamic studies. (Kosher reception follows.) Whitaker Hall Aud. 935-8567.

How to submit 'University Events'

Submit "University Events" items to Angela Hall of the Record staff via:

e-mail — recordcalendar@wustl.edu

campus mail — Campus Box 1070

fax — 935-4259

Upon request, forms for submitting events will be e-mailed, mailed or faxed to departments to be filled out and returned.

Deadline for submissions is noon the Thursday prior to publication date.

Friday, Sept. 12

9:15 a.m. Pediatric Grand Rounds. "The Ckids Study — Refining our Knowledge of Chronic Kidney Disease." S. Paul Hmiel, assoc. prof. of pediatrics. Clopton Aud., 4950 Children's Place. 454-6006.

11 a.m. Energy, Environmental & Chemical Engineering Seminar Series. "Molecular Structure and Stability of Uranium Immobilizing Compounds." Kai-Uwe Ulrich, postdoctoral research assoc. in chemical engineering. Lopata Hall, Rm. 101. 935-5548.

3:30 p.m. Center for the Humanities Symposium. "Little Black Sambo: Children's Literature, Race & a Century of Controversy." (Also 9 a.m.-Noon Sept. 13.) Co-sponsored by University Libraries. Wilson Hall, Rm. 214. Register on-line: library.wustl.edu/units/spec/LBS/registration.html.

Saturday, Sept. 13

7:30 a.m.-3:15 p.m. Cardiothoracic Surgery & Cardiology CME Course. "Recent Advances in the Management of Valvular Heart Disease: The Present State-of-the-Art in Diagnosis and Intervention." Cost: $40. The Ritz-Carlton St. Louis, 100 Carondelet Plaza. 362-6891.

Monday, Sept. 15

11 a.m. Midwest Regional Center of Excellence for Biodefense and Emerging Infectious Diseases Research Guest Lecture. "Challenging Opportunities in Microbial Forensics." Claire M. Fraser-Liggett, prof. of medicine, U. of Md. School of Medicine. Eric P. Newman Education Center, Seminar Rm. B. 286-0432.

Tuesday, Sept. 16

5:30 p.m. Biochemistry & Molecular Biophysics Biophysical Evenings Seminar. "K Channel Molecular Biophysics." Colin Nichols, prof. of cell biology. Cori Aud., 4565 McKinley Ave. 362-4152.

Wednesday, Sept. 17

4 p.m. Assembly Series. Elizabeth Kolbert. Graham Chapel. 935-5285.

4 p.m. Physics Colloquium. "Physical Modeling in Biology: Gene Regulation to Plant Development." Eric Mjolsness, computer science-systems, U. of Calif., Irvine. (3:30 p.m. coffee, Compton Hall, Rm. 245.) Crow Hall, Rm. 204. 935-6276.

Thursday, Sept 18

Noon. Genetics Seminar. "Genetics and 'Race': Biomedical Implications." Lynn B. Jorde, prof. of human genetics, The U. of Utah School of Medicine. McDonnell Medical Sciences Bldg., Rm. 823. 362-2139.

4 p.m. Chemistry Lecture. Annual Joseph W. Kennedy Memorial Lectures. "Chemistry on the Brain: Understanding the Nicotine Receptor." Dennis A. Dougherty, prof. of chemistry, Calif. Inst. of Technology. (3:30 p.m. coffee, Lab Sciences Bldg., Rettner Gallery.) Lab Sciences Bldg., Rm. 300. 935-6530.

4 p.m. The Woman's Club of Washington University Meet The Leaders Symposium. "The Role of Women in the Political Process." Vivian Evelhoff, exec. dir., U. of Mo.-St. Louis; Bunny Burson, artist; and Denise Lieberman, lecturer in political science. Co-sponsored by the Gephardt Institute for Public Service. Danforth University Center, Formal Lounge. 659-8491.

6:30 p.m. Sam Fox School Public Lecture Series. Jana Hawley, prof. of apparel textiles & interior design, Kan. St. U. Steinberg Aud. 935-9300.

Friday, Sept. 19

9:15 a.m. Pediatric Grand Rounds. Annual Strunk Family Lecture. "Epithelial Genes in Childhood Asthma." Neeru Hershey, prof. of pediatrics, U. of Cincinnati College of Medicine. Clopton Aud., 4950 Children's Place. 454-6006.

11 a.m. Chemistry Lecture. Annual Joseph W. Kennedy Memorial Lectures. "Using Unnatural Amino Acids to Probe Neuroreceptors and Ion Channels." Dennis A. Dougherty, prof. of chemistry, Calif. Inst. of Technology. (Coffee served.) McMillen Lab., Rm. 311. 935-6530.

11 a.m. Energy, Environmental & Chemical Engineering Seminar Series. Annual Ryckman Lecture. "Mississippi River Water Quality and the Clean Water Act: Progress, Challenges, Opportunities." David Dzombak, prof. & assoc. dean of civil & environmental engineering, Carnegie Mellon U. Lopata Hall, Rm. 101. 935-5548.

Noon. Neurology Neurorehabilitation Grand Rounds. "Neuroplasticity and Rehabilitation." Leonardo Cohen, senior investigator in human cortical physiology, National Inst. of Neurological Disorders and Stroke. Occupational Therapy Aud.

7:30 p.m. Saint Louis Astronomical Society Meeting. "Star Formation in the Snake's Tail." Bruce Wilking, prof. of physics & astronomy, U. of Mo.-St. Louis. McDonnell Hall, Rm. 162. 935-4614.

Saturday, Sept. 20

7:30 a.m.-2 p.m. Siteman Cancer Center CME Course. "Advances in Diagnosis and Treatment of Hematologic Malignancies." Cost: $130 for physicians, $110 for allied health professionals. Four Seasons Hotel, Lumiere Place Casino & Hotels, 999 Second Street. (4:30 p.m. Physician reception.) To register: 362-6891.

1 p.m. Kemper Art Museum Lecture. "Birth of the Cool: California Art, Design and Culture at Midcentury." Elizabeth Armstrong, chief curator, Orange County Museum of Art. Steinberg Aud. 935-4523.

6:30 p.m. Sam Fox School Public Lecture Series. Elizabeth Armstrong, curator of contemporary art, Minneapolis Inst. of Arts. Steinberg Aud. 935-9300.

Monday, Sept. 22

8 a.m.-5 p.m. St. Louis STD/HIV Prevention Center CME Course. "STD Laboratory Methods." (Continues 8 a.m.-Noon Sept. 23.) Cost: $75. For location and to register: 747-1522.

11 a.m. Electrical & Systems Engineering Seminar. "Soft MIMO Detection at Fixed Complexity." Erik G. Larsson, Linkoping U., Sweden. Bryan Hall, Rm. 305. 935-5565.

Noon. Work, Families and Public Policy Brown Bag Seminar Series. "Strategic Parenting, Birth Order and School Performance." Juan Pantano, asst. prof. of economics. Seigle Hall, Rm. 348. 935-4918.

4 p.m. Immunology Research Seminar Series. "Genetic and Epigenetic Control of Antigen Receptor Gene Assembly." Eugene Oltz, assoc. prof. of microbiology & immunology, Vanderbilt U. School of Medicine. Farrell Learning & Teaching Center, Connor Aud. 362-2763.

Tuesday, Sept. 23

4 p.m. I-CARES Seminar. "Where in the World Will our Energy Come From?" Nate Lewis, prof. of chemistry, Caltech. Co-sponsored by the Dept. of Energy, Environmental & Chemical Engineering. Lab Science Bldg., Rm. 300. 935-5548.

Wednesday, Sept. 24

Noon. Mallinckrodt Institute of Radiology Lecture. Annual G. Leland Melson Visiting Professorship and Lecture. "Update on Ectopic Pregnancy." John S. Pellerito, chief, div. of ultrasound, CT & MRI, North Shore U. Hosp. Scarpellino Aud., 510 S. Kingshighway Blvd. 362-2866.

4 p.m. Physics Colloquium. "Imaging and Modeling Synchronization in Seizures." Sonya Bahar, dir., center for neurodynamics, U. of Mo.-St. Louis. (3:30 p.m. coffee, Compton Hall, Rm. 245.) Crow Hall, Rm. 204. 935-6276.

Eco-fashion subject of Sam Fox symposium

Can eco-fashion outgrow its granola image? On Sept. 18, the Sam Fox School of Design & Visual Arts and the St. Louis chapter of Fashion Group International (FGI) will explore that question with "Eco-Watch … Creating Fashion Solutions."

The evening-length symposium, featuring a panel of speakers known throughout the fashion world, will explore the future of sustainable fashion, the fastest-growing segment of the garment/fashion industry.

The program will begin at 6 p.m. with a keynote address by Jana Hawley, Ph.D., professor and department head for apparel textiles and interior design at Kansas State University. The lecture, titled "Apparel Sustainability in the 21st Century," will explore ways apparel companies can approach issues of environment, education and social equity while still giving attention to the bottom line.

Hawley, a Fulbright Scholar to India and a Global Scholar to Thailand, employs cultural anthropology and qualitative analyses to explore issues relating to textile recycling. Currently vice president of operations for the International Textiles and Apparel Association (ITAA), she also has served as adviser for the International Textile Recycling Conference in Japan.

COURTESY PHOTO

A dress made of 100 percent organic bamboo by Miacro Designs. Bamboo fabric is noted for its softness as well as its natural moisture-wicking properties.

The program will continue with a panel of local fashion professionals, including Lori Allen, owner of Boutique Chartreuse; Nina Ganci, owner and designer of Skif International; and Jennifer McKelvie and Tina Davis-Noble, owners and designers of Miacro Designs. Delcia Corlew of FGI will serve as moderator.

Allen, who has more than a decade of retail experience, founded Boutique Chartreuse, the St. Louis-area's first eco-boutique, in 2007. The company defines its mission as extending "the concept of green to the world of fashion by offering the contemporary, fashion conscious and socially conscious woman the ability to be well dressed while making environmentally responsible wardrobe choices."

Ganci launched Skif International (skif stands for "Sweaters Knitted for Freedom") in 1994. The company creates hand-made and -dyed sweaters and apparel for retailers nationwide and has been eco-conscious since its inception, recycling all excess material.

Miacro Designs is a hand-dyed, hand-printed, ready-to-wear women's collection based in Springfield, Mo. McKelvie worked under Zakee Shariff before completing her first collection, which won design awards from FGI and the ITAA. Davis-Nobel is a former model who spent 10 years working with Marc Jacobs, Karl Lagerfeld, Vivienne Westwood and other major designers. Before co-founding Miacro, she designed under the label Robin.

Corlew began her career in the 1960s as model/spokesperson for Famous-Barr and later joined KXOK-AM as host of the call-in show "Generation Gap." In 1985, she opened the Delcia Agency, representing models and actors and, in 1998, became executive director of Cinema St. Louis. Though now retired, she remains an active member of FGI.

Fashion Group International is a global, nonprofit, professional organization with 5,000 members in the fashion industry, including apparel, accessories, beauty and home.

The Sam Fox School is home to the nation's oldest four-year fashion design program. Alumni have included major designers such as Paula Varsalona and Carolyn Roehm, while recent graduates have worked for major fashion houses and clothing retailers, including Ralph Lauren, Tommy Hilfiger, Calvin Klein, Christian Dior, Nanette Lepore, Lilly Pulitzer, Nike, Lands' End and Fitigues.

Both the lecture and the panel discussion are free and open to the public and take place in Steinberg Hall Auditorium.

For more information, call 935-9300 or visit samfoxschool.wustl.edu.

Jazz at Holmes begins with Alberici quartet

By Liam Otten

Clarinetist Scott Alberici and his quartet will launch Washington University's Jazz at Holmes Series 8 p.m. Thursday, Sept. 11.

The series, which has delighted local jazz enthusiasts since 1996, features professional jazz musicians from around St. Louis and abroad performing in Holmes Lounge — a casual, coffeehouse-style setting — most Thursday evenings at 8 p.m. throughout the fall and spring semesters.

"Over the last decade, the audience attending Jazz at Holmes concerts has grown from a small group to a full house on many evenings," said Sue Taylor, Ph.D., instructor in University College, who has administered the program since its inception along with Steve Ehrlich, associate dean of University College, and guitarist William Lenihan, director of jazz performance in the Department of Music in Arts & Sciences.

"The program has helped foster an intense interest in jazz," Taylor said. "At the same time, students appreciate the relaxed, informal atmosphere, which allows them to read or study while listening to the music."

The series continues Sept. 18 with saxophonist Willie Akins and his quartet, followed Sept. 25 by pianist Carolbeth True and drummer David True in a program titled "Two Times True."

Jazz at Holmes takes a break the night of the vice presidential debate Oct. 2 then continues Oct. 9 with saxophonist Paul DeMarinis, who will be joined by vocalist Debby Lennon. The complete fall schedule is below.

Jazz at Holmes sponsors include the College of Arts & Sciences; Office of Residential Life; Student Union; University College and Summer School; Congress of the South 40; Office of Student Activities; New Student Orientation; Department of Music; and Michael Cannon, executive vice chancellor and general counsel.

All concerts are free and open to the public. For more information, call 862-0874 or e-mail staylor@wustl.edu.

To receive e-mail notices about future events, write to tvs2@wustl.edu.

The schedule

- **Sept. 11**. Clarinetist Scott Alberici and his quartet.
- **Sept. 18**. Saxophonist Willie Akins and his quartet.
- **Sept. 25**. "Two Times True" with pianist Carolbeth True and drummer David True.
- **Oct. 9**. Saxophonist Paul DeMarinis with vocalist Debby Lennon.
- **Oct. 23**. Saxophonist Dave Stone with pianist Adam Maness.
- **Oct. 30**. Guitarist William Lenihan and pianist Ptah Williams perform music from Miles Davis' "Bitches Brew."
- **Nov. 6**. Austrian pianist Elizabeth Harnick and her trio.
- **Nov. 13**. New York saxophonist Dave Liebman and his quartet.
- **Nov. 20**. Fo(u)r Peace Band.
- **Dec. 4**. Guitarist Steve Schenkel with vocalist Ashley Mason.

Meet the author: Kolbert next up in Assembly Series

By Mary Kastens

Veteran New Yorker journalist Elizabeth Kolbert visits the WUSTL campus at 4 p.m. Wednesday, Sept. 17, in Graham Chapel in the next installment of the Assembly Series. Her book, "Field Notes From a Catastrophe: Man, Nature, and Climate Change" (2006) has been applauded as an unbiased overview of an urgent environmental crisis.

Kolbert

Growing out of her groundbreaking three-part series, "The Climate of Man," in The New Yorker in 2005, "Field Notes" explores the debate over global warming using scientific data and personal accounts and observations from scientists, laypeople and the author.

Kolbert's book was chosen by the Freshman Reading Program steering committee to be read and studied by the University's incoming freshmen.

Over the summer, each student received a copy so they would arrive on campus ready for discussions led by selected faculty and campus experts to explore the book's themes. The Freshman Reading Program began in 2003; its goal is to provide opportunities for increased student-faculty interaction.

"The Climate of Man" won the American Association for the Advancement of Science Journalism Award for magazine reporting and the 2006 National Academy of Sciences Communications Award in the newspaper/magazine category.

Kolbert was a political reporter for The New York Times for 14 years before joining The New Yorker in 1999. She is a graduate of Yale University.

The event is free and open to the public. For more information, call 935-4620 or visit assemblyseries.wustl.edu.

And More

Thursday, Sept. 11

6 p.m. Exhibit Reception. "Bold Strokes and Finesse: The Stage Designs of John Ezell." Des Lee Gallery, 1627 Washington Ave. 621-8537.

Friday, Sept. 12

5 p.m. University Libraries Exhibition Reception. "100 Years of Little Black Sambo." Olin Library, Lvl. 1, Ginkgo Reading Rm. 935-5495.

Monday, Sept. 15

All Day. Midwest Regional Center of Excellence for Biodefense and Emerging Infectious Diseases Research Course. "Biosafety for the Research Scientist Training Course." (Continues all day Sept. 16-19.) Eric P. Newman Education Center. To register: www.mrce.wustl.edu.

Tuesday, Sept. 16

All Day. University-wide Blood Drive. Various locations on the Danforth, Medical and West campuses. To register: communityservice.wustl.edu/donateblood.

Friday, Sept. 19

7 p.m. Exhibit Opening Reception. "Birth of the Cool: California Art, Design and Culture at Midcentury." Kemper Art Museum, 935-4523.

Music

Thursday, Sept. 11

8 p.m. Jazz at Holmes. Scott Alberici, clarinet. Holmes Lounge. 862-0874.

Thursday, Sept. 18

8 p.m. Jazz at Holmes. Willie Akins, saxophone. Holmes Lounge. 862-0874.

Sunday, Sept. 21

2 p.m. Faculty Voice Recital. Noel Prince. Graham Chapel. 935-5566.

Monday, Sept. 22

7 p.m. Concert. "The Four B's." Music of Bach, Beethoven, Brahms and Bartok. E. Desmond Lee Concert Hall, 560 Trinity Ave. 935-9226.

On Stage

Monday, Sept. 15

8 p.m. Romance Languages & Literatures Play. "Moliere, by Herself." Silvia Kater, performer. Co-sponsored by Performing Arts Dept., International & Area Studies, Women & Gender Studies and Upstream Theater. Village House Theater. 935-5175.

Sports

Friday, Sept. 12

7:30 p.m. Volleyball vs. Juniata College. Annual Teri Clemens Invitational. Athletic Complex. 935-4705.

8 p.m. Men's Soccer vs. Southwestern U. WUSTL/Fontbonne Classic. Francis Field. 935-4705.

Saturday, Sept. 13

Noon. Volleyball vs. Bethel U. Annual Teri Clemens Invitational. Athletic Complex. 935-4705.

5 p.m. Volleyball vs. U. of Wis.-Whitewater. Annual Teri Clemens Invitational. Athletic Complex. 935-4705.

7 p.m. Football vs. Westminster College. Francis Field. 935-4705.

Sunday, Sept. 14

1 p.m. Women's Soccer vs. Wartburg College. Francis Field. 935-4705.

Thursday, Sept. 18

7 p.m. Women's Soccer vs. Maryville U. Francis Field. 935-4705.

Friday, Sept. 19

All Day. Men's Tennis. WU Fall Invitational. (Also All Day Sept. 20-21.) Tao Tennis Courts. 935-4705.

Give blood so WUSTL can 'keep momentum going'

By Neil Schoenherr

With an increased emphasis on service this election year, the Community Service Office again will be sponsoring four University-wide blood drives throughout the academic year.

The first drive will be held Sept. 16 at 13 locations throughout the WUSTL community, including the Danforth, Medical and West campuses. Donors will have a variety of times from which to choose to make their offering.

Last year's blood drives proved incredibly successful. The University community donated more than 1,800 units of blood, tripling the amount donated during the previous year.

"The community really stepped up last year," said Stephanie Kurtzman, director of the Community Service Office and associate director of the Richard A. Gephardt Institute for Public Service.

"We hope to keep that momentum going. There is great need for blood in the St. Louis area, and our goal is to increase the donations from last year's total," she said.

Kurtzman encourages WUSTL community members to register online so that the events will be properly staffed by the blood banks.

"We welcome walk-in donors, but appointments help us stay on schedule so that donors can get in and out faster," Kurtzman said. "Also, when you sign up online, you can change your appointment at any time."

Those who cannot donate blood or don't want to can also sign up online to volunteer at one of the donation sites.

Would-be donors and volunteers are encouraged to sign up at communityservice.wustl.edu/donateblood.

The blood drives are sponsored by the Community Service Office, in collaboration with American Red Cross and Mississippi Valley Regional Blood Center.

Future blood drives on the WUSTL campuses will take place Nov. 12; Jan. 27, 2009; and March 25, 2009.

Kents' generosity leads to undergraduate Olin scholarships

By Barbara Rea

For a handful of business majors, entering Washington University this fall will be a dream come true. Their dream became reality through the generosity of Jerald and Judy Kent. The Kents have made a $3 million commitment to support undergraduate scholarships in the John M. Olin Business School.

Beginning in the 2008-09 academic year, the Jerry and Judy Kent Scholarships will be awarded to approximately five freshmen each year for the next seven years, and they will remain Kent Scholars for four years in Olin's BSBA program. One freshman each year will be selected through a merit-based competition; the remaining awardees will be based on both merit and financial need.

"The Kents have chosen a gift that will make a critical and immediate impact on the Olin School, the University and in the lives of many talented students," said Chancellor Mark S. Wrighton. "Scholarships open doors and create opportunities that may not otherwise have been possible. I am so grateful for the Kents' generosity and proud to have these scholarships that bear their name."

Mahendra Gupta, Ph.D., dean and the Geraldine J. and Robert L. Virgil Professor of Accounting and Management at Olin Business School, shared Wrighton's enthusiasm.

"Our Kent Scholars will benefit not only from the much-needed financial support but also from the Kents' confidence in them, which their financial commitment represents," Gupta said.

"The Kent Scholars and the Kent family will share a special bond throughout their lifetimes. The impact of the Kents' gift will have a monumental effect on our undergraduate program for years to come. I am humbled by and thankful for their gift," Gupta said.

Jerry Kent's bond with the University began as a business administration major; he earned a BSBA in 1978 and a master's degree a year later. Today, he is a member of the Board of Trustees and serves on the National Council. He received Olin's Distinguished Alumni Award in 2002.

After graduation, he joined accounting firm Arthur Andersen, where he discovered Cencom Cable, a fledgling cable operator. In the early 1980s, the cable industry was developing in fits and starts and considered a risky venture. Channeling his entrepreneurial spirit, Jerry joined the company in 1983. A decade later, he launched Charter Communications.

Through acquisitions, Charter became one of the largest cable communications companies in the industry, employing more than 15,000 people in 28 states. Kent served as president and chief executive officer of Charter through 2001 and then occupied the same positions for a new company, Cequel III LLC, an investment and management firm that develops cable and telecommunications companies.

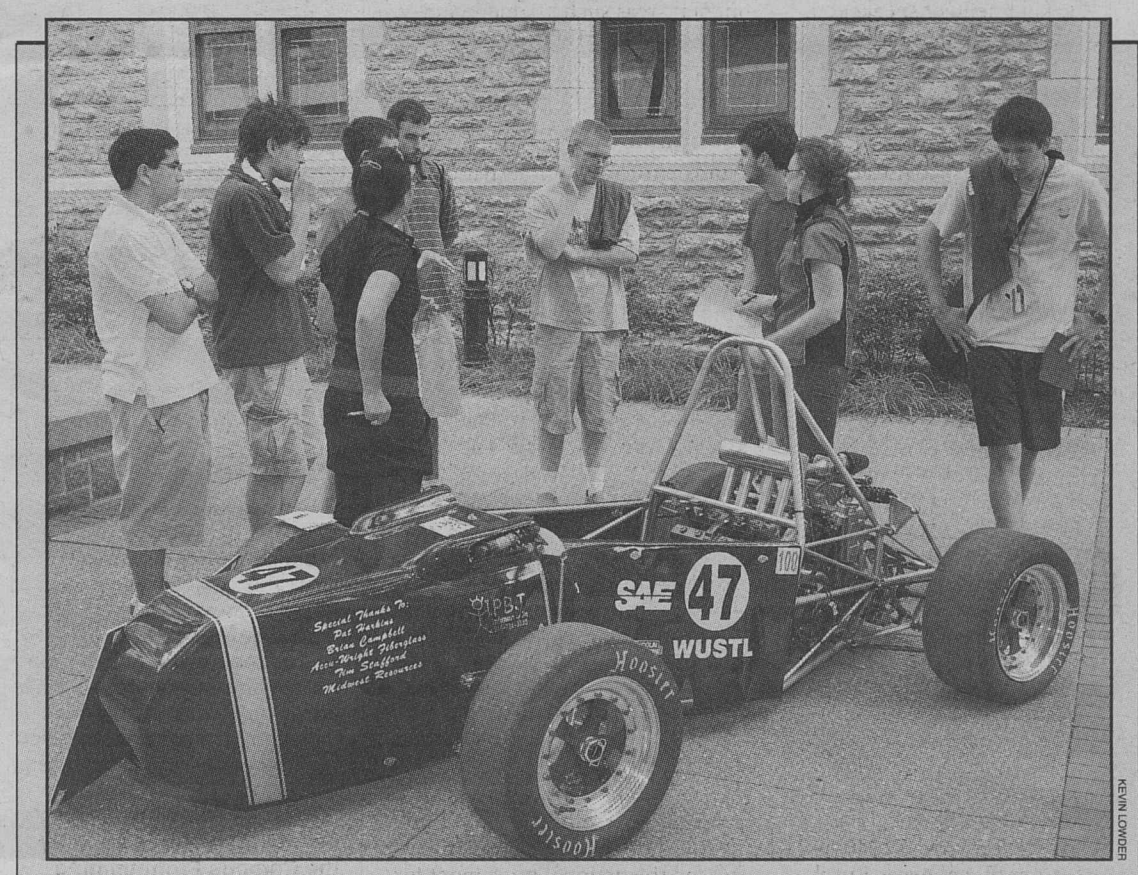
When Charter was sold to Microsoft co-founder Paul Allen in 1998 and went public about a year later, it was the third-largest initial public offering in U.S. history, and Charter was the fourth-largest cable operator in the country.

Under Cequel, Kent co-manages Suddenlink Communications (formerly known as Cebridge Connections Holdings LLC), one of the nation's largest broadband cable companies. Until 2006, he also managed AAT Communications Corp., which owned and operated towers. In 2005, the firms were two of the St. Louis region's largest revenue producers among privately-held companies.

Both Judy and Jerry have strong ties to the St. Louis community, which is reflected in their volunteer engagements. Judy serves on the board of trustees for Stages St. Louis and the Judevine Center for Autism. She co-owns Vie, a women's clothing boutique.

In addition to giving his time and talents to the University, Jerry serves his home community as a board member of The Magic House, St. Louis Children's Museum; the Saint Louis Zoo; and Regional Justice Information Services.

He lends his professional expertise to a number of advisory groups, including Cable in the Classroom, and is on the board of directors of the Cable Center, C-SPAN, CableLabs and the National Cable & Telecommunications Association.



KEVIN LOWDER

Getting up to speed on engineering clubs Yun Que (in black, next to car), a senior and executive board member of the student group Society of Automotive Engineers, introduces her organization to new engineering students at an orientation picnic Aug. 26 outside Lopata Hall. The picnic was sponsored by EnCouncil, the undergraduate student government for the School of Engineering and Applied Science, and Engineering Student Services. Engineering student groups set up booths and presented information about their organizations and projects at the picnic, which also included food and ice cream.

Society names award for Welch

By Michael C. Purdy

The Society for Nuclear Medicine (SNM) has created an annual award named for Michael J. Welch, Ph.D., professor of radiology, of developmental biology and of chemistry at the School of Medicine.

Welch, who specializes in the synthesis of new radioactive chemicals for medical imaging, is head of the Radiochemistry Laboratory Institute at the Mallinckrodt Institute of Radiology and a member of the Senior Leadership Committee of the Siteman Cancer Center. Over the course of more than 40 years at the School of Medicine, he has developed imaging agents for use in a wide variety of medical contexts. He focuses his research on agents that can help researchers better understand the connections between diabetes and heart disease.

Welch

The Michael J. Welch Award, created by the Radiopharmaceutical Sciences Council (RPSC) of the SNM, will be given annually for outstanding work in the field. It includes a $1,000 honorarium.

RPSC president Robert H. Mach, Ph.D., professor of radiology, of cell biology and physiology, and of biochemistry and molecular biophysics at the School of Medicine, said that the RPSC had been debating for several years about whom to name the award for.

"We had a difficult time deciding on the most appropriate honoree until we detailed all the criteria the honoree needed to meet," he said. "Then it became apparent to everyone that Michael J. Welch was our most deserving member, the one researcher who unreservedly met all the criteria."

Campus Watch

The following incidents were reported to University Police Sept. 3-8. Readers who have information concerning these incidents are urged to call 935-5555.

Sept. 4

11:03 a.m. — A handcart was stolen from the Village East building.

Sept. 5

7:40 a.m. — Students reported that backpacks, wallets, cell phones and other items were stolen at Mudd Field.

4:13 p.m. — A person reporter that her purse was stolen at the Danforth University Center.

6:09 p.m. — A wallet was stolen from a bookbag at the Mallinckrodt Student Center.

Sept. 6

5:00 p.m. — A Saint Louis University student reported that his laptop was stolen from outside the Catholic Student Center. The laptop was taken from him by occupants of two vehicles stolen elsewhere. They entered the center's parking lot allegedly seeking street directions. The suspects then immediately left the vicinity, according to Clayton police, in whose jurisdiction the off-campus event occurred.

Sept. 8

3:13 p.m. — A student reported his wallet was lost or stolen in the Lab Science Building.

Additionally, University police responded to four accidental injuries, four reports of damaged property, three automobile accidents, two lost articles, one liquor violation, one parking violation, one report of fraud and one report of trespassing.

Sports

Volleyball sets sight on No. 1 Juniata

The No. 2 volleyball team ran its 2008 record to 8-0 with four wins at the WU/Asics National Invitational last weekend at the WU Field House.

The Bears defeated three teams ranked in the America Volleyball Coaches Association top 25 poll, No. 11 Ohio Northern University, No. 22 Central College (Iowa) and No. 24 California Lutheran University.

Three WUSTL student-athletes were named to the all-tournament team: senior rightside attacker Nikki Morrison, junior middle hitter Erin Albers and senior setter Audra Janak. Morrison and Albers tied for the team lead in kills over the weekend, totaling 35 each, while Janak ran the offense, racking up 133 assists to go along with 27 digs and 22 kills.

Up next is the Fifth Annual Teri Clemens Invitational Friday and Saturday, Sept. 12-13, in the WU Field House. The event is the premier Division III regular-season tournament in the country and features three teams ranked in the top 25 poll — the same three schools that have combined to win each of the past six Division III titles: WUSTL, Juniata College and the University of Wisconsin-Whitewater.

The Bears play 7:30 p.m. Friday, Sept. 12, in a most anticipated early-season match against No. 1 Juniata College.

Football opens at home with a win

The Bears (1-0) limited Greenville College to 155 yards of total offense in a 22-0 season-opening victory Sept. 6. The shutout was WUSTL's first since a 61-0 win at Westminster College Sept. 9, 2006. The victory also was a milestone for coach Larry Kindbom, who notched the 150th win of his career in 26 seasons as a head coach.

Greenville was held in the check the entire game by the defense. The Panthers punted nine times in the loss and were limited to eight first downs.

Kindbom

Sophomore Jim O'Brien set the tone early as he returned the opening kickoff 81 yards for a touchdown, and the Bears never looked back. Senior quarterback Buck Smith finished 13-of-32 for 154 yards with two touchdowns. Junior Matt Glenn led the ground attack with 13 carries for 60 yards, while senior Brent Sensenich led the Bears' defense attack with seven tackles, including one sack and a tackle for loss.

WUSTL's next game is Saturday, Sept. 13, at 7 p.m. at home against Westminster College.

Men's soccer still looking for offense

The men's soccer team will continue to try to get its offense on track after losing to Westminster College, 2-1, in Fulton, Mo., Sept. 6 and falling to 1-2 on the season.

WUSTL has scored four goals through three games this year; a year ago, the team was averaging four goals per game through its first three contests.

The Bears will try to find some offense this weekend in the WU/Fontbonne Classic. They play Southwestern University at 8 p.m. Friday, Sept. 12, then Denison University at 6 p.m. Saturday, Sept. 13.

Women's soccer has 1-1-1 road trip

The No. 9 women's soccer team concluded a three-game road trip with a 4-2 come-from-behind victory at Claremont-Mudd-Scripps Colleges Sept. 7 in Claremont, Calif., to salvage a 1-1-1 road trip. Senior Lauren Mehner scored two goals, including the game-winner.

Washington University (3-1-1) hosts Wartburg College at 1 p.m. Sunday, Sept. 14, at Francis Field. Head coach Jim Conlon will be shooting for career win No. 100 as a college women's coach against Wartburg. Conlon spent eight seasons at Wartburg compiling a 96-57-5 overall record.

Notables

'Access to Justice' series begins Sept. 23

By Jessica Martin

Terry Smith, J.D., professor of law at Fordham University and nationally recognized expert on race and politics, will kick off the School of Law's 11th annual Public Interest Law & Policy Speakers Series at noon Sept. 23 with a timely talk on politics and racism.

The fall lineup of speakers also includes an international peace negotiator, a former government environmental attorney and administrator, a renowned human rights lawyer and author and a nationally recognized leader in the marriage equality movement.

Titled "Access to Justice: The Social Responsibility of Lawyers," the yearlong series brings to WUSTL nationally and internationally prominent experts in such areas as international human rights, the economics of poverty, racial justice, clinical legal education, government public service and pro bono legal practice.

Karen L. Tokarz, J.D, the Charles Nagel Professor of Public Interest Law & Public Service and director of the law school's Dispute Resolution Program, coordinates the series in conjunction with Pauline Kim, J.D., associate dean for research and faculty development and professor of law.

All lectures will be held at noon in the Bryan Cave Moot Courtroom of Anheuser-Busch Hall unless otherwise noted. They are free and open to the public.

For more information, contact Jeanne Heil-Chapdelaine at 935-7567.

The schedule

• **Sept. 23**. Terry Smith, J.D., will present "Politics and Post-Racialism: Reflections on the Meaning of a Black President."

Smith is a Washington University Distinguished Visiting Scholar and a nationally recognized expert on race and the workplace, race and politics, voting rights and election law. Smith is a frequent commentator on national news networks and blogs.

• **Oct. 27**. Betty Oyella Bigombe, the Africa Program Distinguished Fellow at the Woodrow Wilson International Center for Scholars and senior fellow with the United States Institute of Peace, will discuss "The Challenges of Mediation: Peace Negotiations With the Lord's Resistance Army and Other Conflicts in Uganda." This lecture is co-sponsored by the Whitney R. Harris World Law Institute and the Dispute Resolution Program.

Bigombe is a senior international mediator with more than a decade of hands-on experience in conflict management/resolution, mediation and support services to war-torn societies. In addition to working in various departments at the World Bank, Bigombe served in the Ugandan government as minister of state, a member of Parliament and as deputy minister.

• **Nov. 6**. Mary Gade, J.D., former Environmental Protection Agency (EPA) regional administrator, will speak about "The Seven Dirty Words You Can Never Use at the EPA: Thoughts for a New Administration."

Gade, a 1977 graduate of the School of Law, administered federal environmental programs in Illinois, Indiana, Michigan, Minnesota, Ohio and Wisconsin.

In addition to serving as a partner in the environmental practice group of Sonnenschein Nath & Rosenthal LLP, she held a number of EPA senior management positions in key environmental areas such as emergency response, Superfund cleanup and pollution prevention. She resigned from the EPA in May of this year.

• **Nov. 12**. 5:30 p.m. Philippe Sands, professor of international law and director of the Centre on International Courts at University College in London, will present "Torture Team: Rumsfeld's Memo and the Betrayal of American Values." This lecture is co-sponsored by the Harris World Law Institute.

Sands is an internationally recognized human rights lawyer, public commentator and author of the groundbreaking books "Lawless World: America and the Making and Breaking of Global Rules" and the recent "Torture Team: Cruelty, Deception and the Compromise of Law."

• **Nov. 19**. Evan Wolfson, J.D., executive director and founder of Freedom to Marry, will present "Why Marriage Matters: America, Equality, and Gay People's Right to Marry." Author of a book by the same name, Wolfson is a longtime lesbian/gay civil rights leader who has led the national movement for marriage equality in the United States.

While working at the Lambda Legal Defense & Education Fund, Wolfson became the first Lambda attorney to argue before the U.S. Supreme Court, urging the justices to reject the Boy Scouts of America's appeal of a unanimous ruling from the New Jersey Supreme Court striking down their ban on gay members and leaders.

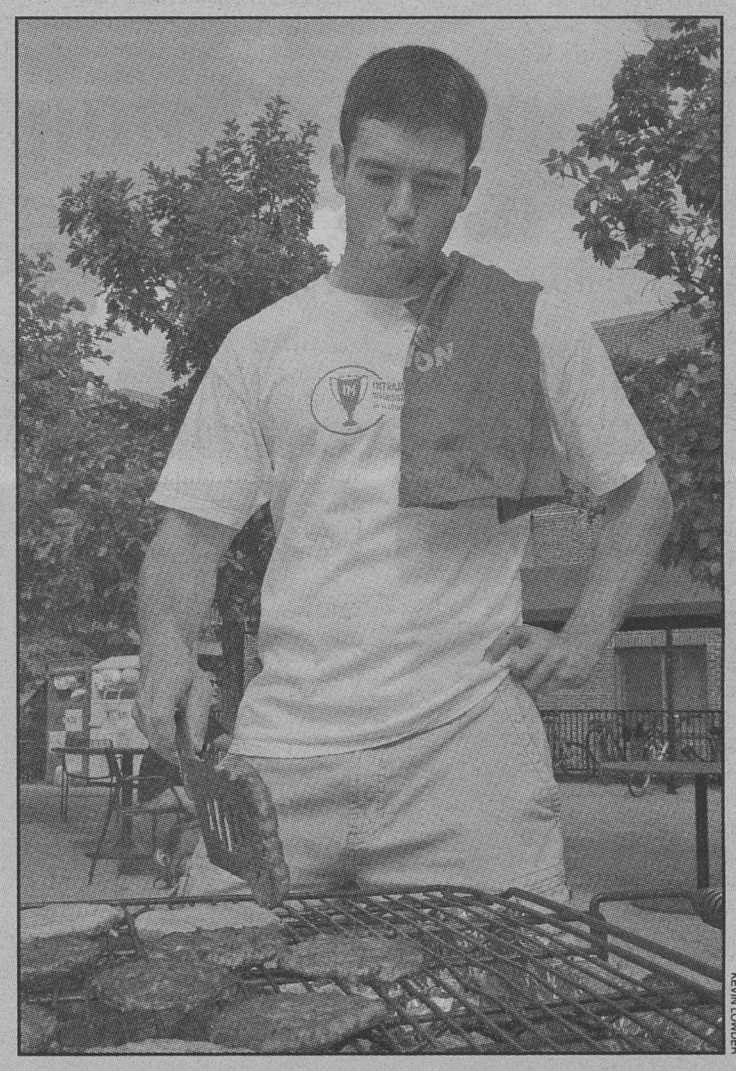
In other cases, he championed lesbian and gay military personnel fighting for the right to serve, gay parents wishing to adopt children and preserve visitation rights, and New York City employees demanding equal health benefits and recognition for their partners.

KEVIN LOWDER

First of many Fridays

At First Friday, a day of programming on the first Friday of classes, Jessica Strong (above, left), a junior majoring in education in Arts & Sciences, gets information on the annual Dance Marathon from Andrew Seidl, a junior majoring in American culture studies and religious studies, both in Arts & Sciences, Aug. 29 in The Village. The annual event, sponsored by the Campus Programming Council, marks the celebration of the first Friday of the new school year and features free food, inflatable games, student group sign-ups and entertainment.

Graduate student Brian Sinn (right) flips burgers for hungry First Friday participants.


KEVIN LOWDER

For the Record

Of note

William A. Frazier, Ph.D., professor of biochemistry and molecular biophysics, has received a five-year, $1,250,000 grant from the National Institutes of Health/National Heart, Lung, and Blood Institute for research titled "Integrin Associated Protein/CD47 is a Thrombospondin Receptor." …

C. Charles Gu, Ph.D., assistant professor of biostatistics, has received a four-year, $684,000 grant from the National Institute of Health for research titled "Variable Selection in Genetic Epidemiological Studies of Cardiovascular Diseases." …

James E. McLeod, vice chancellor for students and dean of the College of Arts & Sciences, received the 2008 St. Louis American Foundation Lifetime Achiever award at the Salute to Excellence in Education Scholarship and Awards Banquet in St. Louis Sept. 5. …

Jason C. Mills, M.D., Ph.D., assistant professor of pathology & immunology and of developmental biology, received a five-year, $1,577,000 grant from the National Cancer Institute for research titled "Molecular Regulation of Gastric Chief (Zymogenic) Cell Differentiation." …

Linda J. Pike, Ph.D., associate professor of biochemistry and molecular biophysics, has received a $1,124,800 grant from the National Institutes of Health for research titled "EGF Receptor Activation and Interaction with ERBB Family Receptors." …

Robert Pless, Ph.D., associate professor of computer science and engineering, has received a three-year, $205,000 grant from the Naval Research Laboratory for research titled "Visual Algorithms for Interactive Tracking in Surveillance Networks." …

Thaddeus Stappenbeck, M.D., Ph.D., assistant professor of pathology & immunology and of developmental biology, received a five-year, $1,520,000 grant from the National Institute of Diabetes and Digestive and Kidney Diseases for research titled "Responses of Intestinal Stem Cells to Epithelial Injury." …

Skip Virgin, M.D., Ph.D., professor of pathology & immunology and of molecular microbiology, received a five-year, $1,393,384 grant from the National Cancer Institute for research titled "Immunologic Control of g-herpesvirus Latency."

Notables policy

To submit Notables for publication in the Record, e-mail items to Jessica Daues at jessica_daues@wustl.edu or fax to 935-4259.

Obituary

Swanson, 85

W. Milton Swanson, Ph.D., professor emeritus of mechanical engineering, died Monday, Aug. 25, in Manson, N.C. He was 85. Swanson served as associate professor from 1960-64 and professor from 1964-1984.

Washington People

Genome technology whiz

Mardis stays on top of technology to help pinpoint causes of disease

BY CAROLINE ARBANAS

Those of us who are bewildered by the furious pace of changing technology wouldn't want to walk in the shoes of Elaine R. Mardis, Ph.D., co-director of the Genome Sequencing Center (GSC).

Her domain is not cell phones, laptop computers or other such conveniences of the modern age. Rather, Mardis specializes in half-million-dollar genome sequencers and the technological accoutrements that have enabled scientists to decode whole genomes at lightning speed and probe human DNA for variations linked to diseases such as cancer.

She is charged with researching and evaluating all new technologies considered by the GSC. It's a huge job; genome technology is evolving faster than ever, and companies consistently claim their technology is better than anyone's.

"Elaine's task is to figure out what technology is the real deal, what is hype, and what is worth taking a closer look at, and then to make the decision about whether we should devote time and resources to take a new technology to the next level," says Richard K. Wilson, Ph.D., director of the GSC. "She's very good at this. Elaine screens out a lot of stuff before she finds something to really get excited about."

ROBERT BOSTON

Elaine R. Mardis, Ph.D. (right), co-director of the Genome Sequencing Center (GSC), works with Lisa Cook, research lab manager, at a next-generation genome sequencing machine. "Elaine's task is to figure out what technology is the real deal, what is hype and what is worth taking a closer look at, and then to make the decision about whether we should devote time and resources to take a new technology to the next level," says Richard K. Wilson, Ph.D., director of the GSC.

Elaine R. Mardis

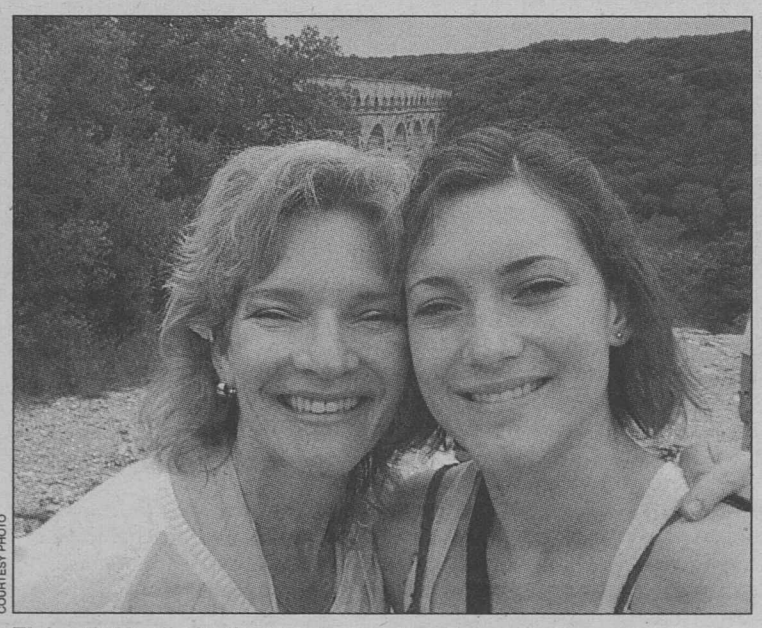
Position: Co-director, Genome Sequencing Center; associate professor of genetics and of molecular microbiology

Education: B.S., zoology, University of Oklahoma; Ph.D., chemistry and biochemistry, University of Oklahoma

Family: Husband, Larry, an airplane pilot; daughter, Lauren, 17

Sport: Tae kwon do. Mardis holds a first-degree black belt.

Hobbies: Mardis is an avid reader and novice golfer. She is now reading "Einstein's Dreams" by MIT professor Alan Lightman, Ph.D.; "Night" by Nobel Prize winner Elie Wiesel; and "The Last Lecture" by the late Carnegie Mellon professor Randy Pausch, Ph.D. She has recently taken up golf and finds it far more challenging than DNA sequencing technology.



COURTESY PHOTO

Elaine R. Mardis (left) with her daughter, Lauren, on vacation in France.

A budding scientist

Mardis' passion for science began as a child.

"I'm one of those really weird people who knew since I was very young that I wanted to be a doctor or a scientist," she says. Her enthusiasm was nurtured by her father, who taught chemistry at a junior college in North Platte, Neb., for more than 30 years.

But it was a college biochemistry class taught by Bruce Roe, Ph.D., the George Lynn Cross Research Professor at the University of Oklahoma, that opened Mardis' eyes to the awe-inspiring molecules of life: DNA and its chemical cousin, RNA. "It was like, 'Oh, this is it!' You always hope for a eureka moment, and that was mine," she says.

Mardis stayed at Oklahoma and earned a doctorate in chemistry and biochemistry under Roe's tutelage. It was there that she first crossed paths with Wilson, who was working on a doctorate in the same laboratory.

When Mardis began her graduate work in the mid-1980s, Roe was one of the few U.S. scientists proficient at sequencing, or reading, the precise order of chemical bases that make up DNA. It was a slow, laborious task.

Mardis mastered the technique and found herself on the receiving end of efforts by others to automate DNA sequencing: Roe's was the first academic laboratory in the country to possess a fluorescent DNA sequencer, the machine that later made large-scale sequencing possible.

The machine attached different colors of fluorescent dyes to the four different chemical units in the genetic code, allowing the sequence to be read by machine. About that same time, simple robotic arms were introduced to further automate the process. They were designed to push down on pipette tips, which could then move to another workspace and pick up set volumes of samples containing DNA for sequencing.

Like the rest of the technology being developed at the time, the robotic apparatus was clunky and slow. Rather than get frustrated, Mardis became a technological pioneer. She was part of the first generation of scientists who used ingenuity and resourcefulness to pull together the technology necessary to make the automated DNA sequencing feasible.

She was also ahead of her time. When she finished a doctorate in 1989, no federal research funds existed for DNA sequencing projects. Instead, the focus was on first developing physical maps of the locations of genes within a genome.

"I wasn't interested in that kind of work or trained in it," Mardis says. Instead, she took a position at Bio-Rad Laboratories, a California-based company, to help develop the technological components to make DNA sequencing easier.

A technological innovator

But the landscape for genomics changed dramatically in 1993. The University's GSC had just received a multimillion dollar grant to sequence the *C. elegans* roundworm, a prelude to the Human Genome Project. To do the work, the GSC had to ramp up its DNA sequencing capabilities to handle bigger chunks of genetic material.

"We really needed someone who had been thinking about the technology 100 percent of the time," Wilson says. "I had followed Elaine's work in grad school and at Bio-Rad, and I thought she was clearly the only person in the genome community who could get it right."

With Mardis on board, the GSC became the first large-scale sequencing center with a dedicated technology group. Its mission was to develop technology and find out about technology being developed elsewhere — either by companies or academic laboratories — and determine whether it would be a good fit for the GSC.

To understand the technology and the way it works, Mardis had to learn components of engineering, molecular biology, enzymology, optical engineering, computer science and nanotechnology, among others.

"I think most of modern genomics involves a certain amount of appreciation for the interplay between these different disciplines," Mardis says. "When you start to think about all the different components that go into the technology and that actually have to talk to each other in a systematic way to reliably produce data, well, it's a minor miracle that it all works."

A consummate collaborator

As an extension to her work heading the technology development core, Mardis also plays key roles in many of the GSC's sequencing projects.

The GSC is involved in several projects to sequence the genomes of nonhuman primates, such as chimpanzees and orangutans, which are some of human's closest living relatives. "These animals need to be understood at a genetic level and at a genomic level because they provide essential information about the course of human diseases, such as diabetes, hypertension and HIV," she says.

Mardis also is heavily involved in studies to find the numerous genetic alterations in cancer as part of the federally funded Cancer Genome Atlas project. The research initially focuses on ovarian and lung cancer and glioblastoma, an aggressive brain tumor.

Genetic errors, or mutations, are known to accumulate in normal cells, ushering in a transformation that can lead to cancer. An estimated 300 genes involved in cancer are already known, and a more in-depth search could identify numerous others that determine, among other things, how aggressive a particular tumor is or which drugs might work best to treat it.

Throughout the medical school, Mardis has garnered a reputation for going out of her way to help physicians, scientists and medical students understand how genomics can advance their own research studies.

"Elaine is a vital link between the Genome Sequencing Center and the investigators in molecular medicine at the Siteman Cancer Center," says Matthew J. Ellis, M.D., Ph.D., the Anheuser-Busch Endowed Professor in Medical Oncology. "We explain to Elaine our clinical issues and what we're trying to accomplish. She plays the role of interpreter to explain how the technology at the genome center can help us."

Together, Ellis and Mardis are developing a breast cancer genome atlas to document all the genetic changes associated with breast tumors. The project provides the framework for physicians to understand which genetic changes drive poor outcomes, such as early recurrence or a lack of response to treatment.

Cancer databases like those being developed at the GSC could help usher in a new era of personalized medicine, where disease treatments are based on a person's genetic makeup.

The GSC's next-generation genome sequencers — all 20 of them — are churning out genome sequence data exponentially faster than earlier machines, thereby speeding scientists' ability to pore over the genome in search of disease genes.

The machines first used to sequence the human genome allowed 96 discrete sequencing reactions to occur at a time, but the newer sequencers permit anywhere from 800,000 to 80 million simultaneous reactions.

"This has a big pay-off in speed, efficiency and ultimately cost and puts us closer to realizing possibilities of personalized medicine," Mardis says.

While acknowledging the challenges of staying on top of the rapid changes in technology, Mardis says she enjoys the fast pace of her work.

"It is ever-changing, so there is never a dull moment," she says. "You never stand still. It is very, very exciting to see these new instruments and imagine how ultimately they will transform medical practice."